In the Claims:

1. (Presently Amended) A method, ~~for analyzing the quality of a high speed signal~~ comprising the steps of:

setting a phase rotator in a first position;

initializing a partial value associated to said set phase rotator position;

sampling ~~said~~ a high speed signal to generate a signal sample;

shifting the signal sample by 1 bit to generate a shifted sample;

XORing said sample and said shifted sample ~~shifted by 1 bit~~;

ORing ~~the~~ a result of said ~~XOR~~ XORing ~~operation~~step with said partial ~~result~~value associated to said set phase rotator position;

replacing ~~the value of~~ said partial ~~result~~value associated to said set phase rotator position ~~by the~~ with a result of said ~~OR operation~~ ORing step;

repeating the last ~~four act~~five steps of sampling, shifting, XORing, ORing and replacing during a predetermined time interval to thereby generate the partial value associated to said set phase rotator position;

setting said phase rotator in a second position and repeating the last ~~six acts~~ seven steps of initializing, sampling, shifting, XORing, ORing, replacing and repeating to thereby generate a partial value associated to said second phase rotator position; and

combining said partial ~~result~~values associated to said first and second positions into a global value; and

analyzing the global value to determine a quality of the high speed signal.

2. (Presently Amended) The method of claim 1 wherein the phase rotator is set to all its possible positions, a partial ~~result~~value being determined for each position of said phase rotator, and wherein the step of combining said partial values into the global value ~~quality of said high speed signal is characterized by the combination of said partial results~~comprises combining all of said partial values into the global value.

3. (Cancelled)

4. (Presently Amended) The method of claims 1 or 2 wherein the step of repeating the last five steps of sampling, shifting, XORing, ORing and replacing during a predetermined time interval to thereby generate the partial value associated to the set phase rotator position is repeated several hundreds of ~~sampling are done~~times for each position of said phase rotator.

5. (Presently Amended) The method of claims 1 or 2 wherein the step of analyzing the global value further ~~comprising~~ comprises the steps of:

correcting the global value ~~characterizing the quality of said high speed signal~~ to generate a corrected global value, and

analyzing the corrected global value.

6. (Presently Amended) The method of claim 5 wherein ~~said~~ the step of correcting said global value ~~characterizing the quality of said high speed signal~~ comprises:

if ~~said~~ the step of shifting is a right shifting, suppressing a number n of consecutive bits equal to one, from the right, for each set of consecutive bits equal to one; and

if ~~said~~ the step of shifting is a left shifting, suppressing a number n of consecutive bits equal to one, from the left, for each set of consecutive bits equal to one, wherein n is the number of position reached by said phase rotator, minus one.

7. (Presently Amended) The method of claims 1 or 2 further comprising:

replacing a value zero by a character `-` in the global value ~~characterizing the quality of said high speed signal~~; and

replacing a value one by a character `X` in the global value ~~characterizing the quality of said high speed signal~~.

8. (Presently Amended) The method of claims 1 or 2 further comprising the step of analyzing the behavior of said phase rotator according to said high speed signal.

9. (New) The method of claim 6, wherein the step of analyzing the corrected global value further comprises the steps of:

constructing a digital eye from the corrected global value; and

analyzing the digital eye to determine the quality of the high speed signal.

10. (New) The method of either claim 1 or claim 2, further comprising the step of storing the partial values as a table entry having a common number of bits, a table entry row corresponding to the partial value phase rotator position and a table entry column corresponding to a partial value bit position; and

wherein the step of combining said partial values into the global value comprises merging stored partial value bits according to a table storage order.

11. (New) The method of claim 10 wherein the step of merging the stored partial value bits into the global value comprises concatenating the stored bits in an order from a table top to a table bottom and from a table right to a table left.

12. (New) The method of claim 11 wherein the step of concatenating comprises the steps of:

initializing the global value and a row variable *I* to zero;

setting a column variable *J* to the common number of bits;

concatenating a partial value bit having a table coordinate (*I*, *J*) to the global value;

if row variable *I* is not a last table row:

incrementing the row variable *I*;

concatenating a partial value bit having a table coordinate (incremented *I*, *J*) to the global value; and

repeating the steps of incrementing the row variable *I* and concatenating the partial value bit having the table coordinate (incremented *I*, *J*) until the row variable *I* is the last table row; and

if row variable *I* is the last table row and variable *J* is not equal to zero:

initializing the row variable *I* to zero;

decrementing the column variable *J* by one;

concatenating a partial value bit having the table coordinate (*I*, decremented *J*) to the global value; and

repeating steps of incrementing the row variable *I*, and concatenating a partial value bit having the table coordinate (incremented *I*, decremented *J*) to the global value for each value of variable *J* until variable *J* is equal to zero.